8 x 8 HDMI Matrix Switch with Scaler

VM5808H

User Manual

www.aten.com

EMC Information

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

CE Warning:

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

RoHS

This product is RoHS compliant.

Safety

This product has been classified as Information Technology Equipment.

SJ/T 11364-2006

The following contains information that relates to China.

部件名称	有毒有害物质或元素					
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
电器部件	●	○	○	○	○	○
机构部件	○	○	○	○	○	○

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006规定的限量要求之下。

●: 表示符合欧盟的豁免条款，但该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。

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User Information

Online Registration

Be sure to register your product at our online support center:

International	http://eservice.aten.com

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-10-5255-0110
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
United Kingdom	44-8-4481-58923

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Package Contents

The VM5808H package consists of:

- 1 VM5808H 8 x 8 HDMI Matrix Switch with Scaler
- 1 Power Cord
- 1 IR Remote Control
- 1 IR Receiver
- 1 Mounting Kit
- 1 User Instructions*

Check to make sure that all the components are present and that nothing got damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit, and/or any of the devices connected to it.

***** Features may have been added to the VM5808H since this manual was published. Please visit our website to download the most up-to-date version.

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About this Manual

This User Manual is provided to help you get the most from your VM5808H system. It covers all aspects of installation, configuration and operation. An overview of the information found in the manual is provided below.

Chapter 1, Introduction, introduces you to the VM5808H system. Its purpose, features and benefits are presented, and its front and back panel components are described.

Chapter 2, Hardware Setup, describes how to set up your VM5808H installation.

Chapter 3, Front Panel Configuration, explains the fundamental concepts involved in operating the VM5808H at the local site via the front panel LCD display using pushbuttons.

Chapter 4, System Operation, provides a complete description of the VM5808H's Browser Graphical User Interface (GUI), and how to use it to remotely configure and operate the VM5808H.

Chapter 5, RS-232 Protocol Commands, provides a complete list of the serial control protocol commands used when utilizing the RS-232 Serial Port so that an extra source device can be utilized in the installation.

An Appendix, provides specifications and other technical information regarding the VM5808H.

Conventions

This manual uses the following conventions:

`Monospaced`	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
→	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start → Run means to open the *Start* menu, and then select *Run*.
	Indicates critical information.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

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Chapter 1
Introduction

Overview

The ATEN VanCryst VM5808H 8 x 8 HDMI Matrix Switch with Scaler is a versatile solution that provides an easy way to route high definition video and audio from any of 8 HDMI sources to any of 8 HDMI displays at the same time. As a Matrix Switch, each input can be independently connected to any or all outputs, giving you the ultimate in flexibility and control in any multi-display audio/video installation.

The VM5808H features Seamless Switching, which employs FPGA matrix system architecture to seamlessly switch between multiple sources and multiple displays. With EDID Expert technology, the VM5808H selects the optimum EDID settings for smooth power-up and highest quality display. It also features a high-performing scaling engine that converts the video resolution into the display's native resolution to give you the best image quality.

You can easily configure the VM5808H via the front panel LCD display / pushbuttons, and through the use of an IR Remote Control – the LCD provides a quick view of all port connections, and lets operators access the unit's built-in configuration utility.

Furthermore, the VM5808H allows convenient configuration and operation via an intuitive Graphical User Interface (GUI) using any web browser. Because your VM5808H can be controlled over a standard TCP/IP connection, it conveniently integrates into any existing network for easy remote access. For complete system and install integration, serial control is standard through the VM5808H's built-in RS-232 port that allows the switch to be controlled through a high-end controller or PC.

The VM5808H is an ideal solution for applications that require HDMI output from multiple sources to be conveniently delivered to any of multiple destinations, such as stage presentations, competitions, control centers, and system installations that require real-time reports.

Features

- Connects any of 8 HDMI sources to any of 8 HDMI displays
- Long Distance Transmission – supports up to 15 m (24 AWG)
- HDMI (3D, Deep color); HDCP compatible
- Features a built in high-performance scaler function for best image quality
- Easily switch between mulitple sources and multiple displays
- Seamless Switch – provides continuous video streams, real-time switching and stable signal transmission*
- EDID Expert technology – selects optimum EDID settings for smooth power-up and highest quality display
- Front Panel Configuration:
  - Front panel LCD display and pushbuttons
  - IR Remote Control
- System Operation:
  - Serial controller
  - Browser Graphical User Interface (GUI)
  - Telnet
- Built-in bi-directional RS-232 serial port for high-end system control
- Superior video quality – HDTV resolution of 480p, 720p, 1080i and 1080p (1920 x 1080)
- Supports Dolby True HD and DTS HD Master audio
- Consumer Electronics Control (CEC) support
- Power On Detection – If an HDMI source is powered off the VM5808H automatically switches to the next powered on source
- Supports IR signals for remote control
- Firmware Upgradeable
- Rack Mountable
- All metal casing

***Note:** If Seamless Switching is enabled, the video output will not display 3D, Deep Color or interlace resolution (i.e., 1080i) features. To avail of these features, you must disable Seamless Switching.

Requirements

The following devices are required for a complete VM5808H installation:

Source Devices

- Computer or A/V source device with HDMI Type A output connector(s)

Note: A DVI/HDMI adapter is required when connecting a DVI source device.

Display Devices

- Display devices or receivers with an HDMI Type A input connector

Cables

- 1 HDMI cable for each source device you will be connecting
- 1 HDMI cable for each display device you will be connecting
- 1 Cat 5e cable
- 1 RS-232 serial cable

Note: No cables are included in this package. We strongly recommend that you purchase high-quality cables of appropriate length since this will affect the quality of the audio and video display. Contact your dealer to purchase the correct cable sets.

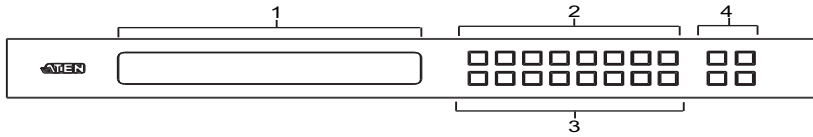
Source Device Operating Systems

Supported operating systems are shown in the table below:

OS		Version
Windows		2000 and higher
Linux	RedHat	6.0 and higher
	SuSE	8.2 and higher
	Mandriva (Mandrake)	9.0 and higher
UNIX	AIX	4.3 and higher
	FreeBSD	3.51 and higher
	Sun	Solaris 8 and higher
Novell	Netware	5.0 and higher
Mac		OS 9 and higher
DOS		6.2 and higher

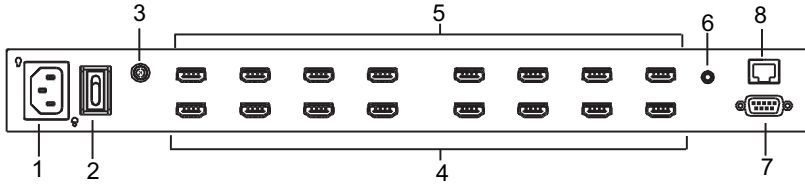
Components

Front View



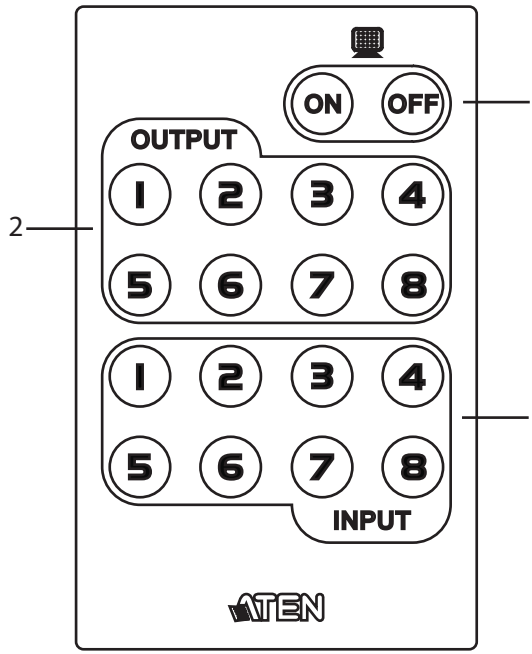
No.	Component	Description
1	LCD Display	The LCD Display gives a quick view of all port connections, and shows the various options for configuring and operating the VM5808H. For full details, see *Main Screen*, page 15.
2	Input Pushbuttons	These pushbuttons refer to the HDMI Input ports found on the VM5808H rear panel. Press to select the Input port. These pushbuttons may also correspond to menu options, connection profiles (P1–P8) and so on. **Note:** The **INPUT** (1–8) front panel pushbuttons have built-in LEDs that light to indicate they have been selected.
3	Output Pushbuttons	These pushbuttons refer to the HDMI Output ports found on the VM5808H rear panel. Press to select the Output port. These pushbuttons may also correspond to connection profiles (P9–P16). **Note:** The **OUTPUT** (1–8) front panel pushbuttons have built-in LEDs that light to indicate they have been selected.
4	Function Pushbuttons	The function pushbuttons (**MENU**, **PROFILE**, **ENTER** and **CANCEL**) are for navigating the LCD built-in configuration utility. For full details, see *Front Panel Pushbuttons***, page 13**. **Note:** The **MENU** and P**ROFILE** front panel pushbuttons have built-in LEDs that light to indicate they have been selected.

Rear View



No.	Component	Description
1	Power Socket	This is a standard 3-pin AC power socket. The power cord from an AC source plugs in here.
2	Power Switch	This is a standard rocker switch that powers the unit on and off.
3	Grounding Terminal	The grounding wire attaches here. See *Grounding*, page 10, for further details.
4	HDMI Input Ports	The cables from your HDMI source devices plug into these ports.
5	HDMI Output Ports	The cables from your HDMI display devices plug into these ports.
6	IR Port	Connect the IR Receiver unit included with your product via this 3.5 mm Mini Stereo Jack.
7	RS-232 Serial Port	Connect a computer or high-end system controller via this serial port.
8	Ethernet Port	In order to access the VM5808H's Browser Graphical User Interface (GUI), the VM5808H must be connected to your network. The cable that connects the VM5808H to your LAN plugs in here. See *Cable Connection*, page 11, for further details

IR Remote Control



No.	Component	Description
1	Power ON/OFF	Use the **ON** and **OFF** pushbuttons to turn the Output displays on or off – by individual port, or all ports. (see *IR Remote Control Operation*, page 30)
2	Output Pushbuttons 1–8	Press **Output** display pushbuttons 1–8 to select the Output display you want to configure (see *IR Remote Control Operation*, page 30).
3	Input Pushbuttons 1–8	Press **Input** source pushbuttons 1–8 to select the Input source you want to display on a selected output (see *IR Remote Control Operation*, page 30).

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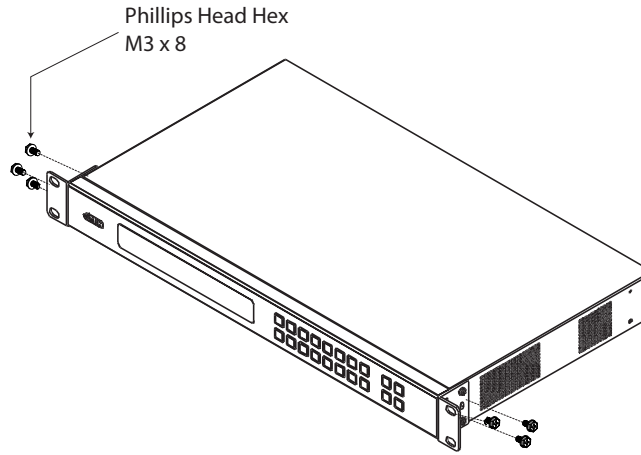
Chapter 2
Hardware Setup

1. Important safety information regarding the placement of this device is provided on page 73. Please review it before proceeding.
2. Make sure that the power to all devices connected to the installation are turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

Rack Mounting

The VM5808H can be mounted in a 19” (1U) system rack. For the most convenient front panel pushbutton configuration and operation at the local site, mount the unit at the front of the rack, as follows:

1. Use the M3 x 8 Phillips head hex screws supplied with the Mounting Kit to screw the rack mounting brackets onto the front of the unit.

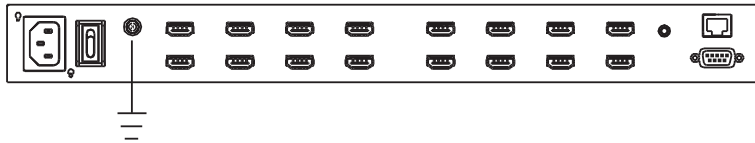


2. Position the unit in the front of the rack and align the holes in the mounting brackets with the holes in the rack.
3. Screw the mounting brackets to the rack.

Grounding

To prevent damage to your installation, it is important that all devices are properly grounded.

1. Use a grounding wire to ground the VM5808H by connecting one end of the wire to the grounding terminal, and the other end of the wire to a suitable grounded object.



2. Make sure that all devices in your VM5808H installation are properly grounded.

Cable Connection

Installation of the VM5808H is simply a matter of connecting the appropriate cables. Refer to the installation diagram on the following page (the numbers in the diagram correspond to the steps below), and do the following:

1. Use a grounding wire to ground the unit by connecting one end of the wire to the grounding terminal, and the other end of the wire to a suitable grounded object.

   Note: Do not omit this step. Proper grounding helps to prevent damage to the unit from surges or static electricity.

2. Connect up to 8 HDMI video sources to the **HDMI Input** ports
3. Connect up to 8 HDMI display devices to the **HDMI Output** ports
4. Connect the IR Receiver into the **IR** port.
5. (Optional) If using the System Operation features (see *System Operation*, page 33), plug a Cat 5e cable from the LAN into the VM5808H's **Ethernet** port.
6. (Optional) If you are using the serial control function, use an appropriate RS-232 serial cable to connect the computer or serial controller to the VM5808H's female **RS-232 Serial** port.
7. Plug the power cord supplied with the package into the VM5808H's 3-prong AC socket, and then into an AC power source.
8. Power on the VM5808H and all devices in the installation.

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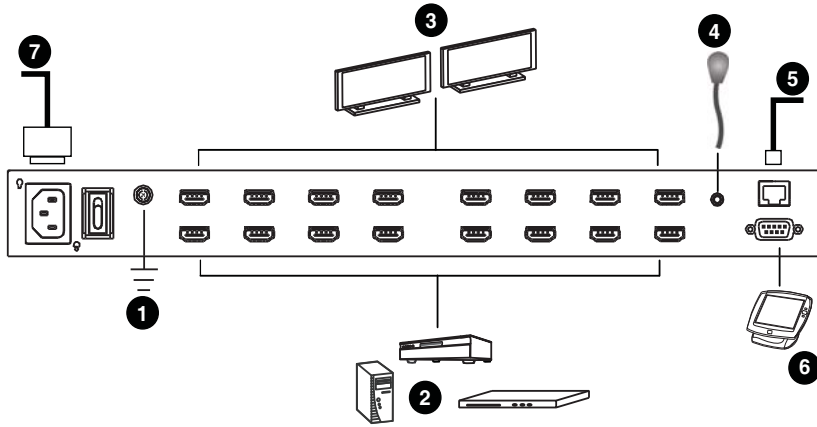
Installation Diagram



Chapter 3
Front Panel Configuration

Overview

The VM5808H can be configured and operated locally via the front panel LCD/pushbuttons and the IR Remote Control; remotely over a standard TCP/IP connection via graphical user interface (GUI) using a web browser; via a remote terminal session using Telnet; or by a RS-232 serial controller.

The local front panel operation is discussed in this chapter. System Operation is discussed in Chapter 4, and RS-232 serial control is discussed in Chapter 5.

Front Panel Pushbuttons

The VM5808H front panel features an LCD display and pushbuttons for convenient configuration and operation locally. This allows users to perform operations such as selecting which source shows on which display, viewing the IP settings, configuring the serial port, setting the EDID Mode / CEC / OSD / Output Status, selecting security settings, and loading/saving connection profiles.

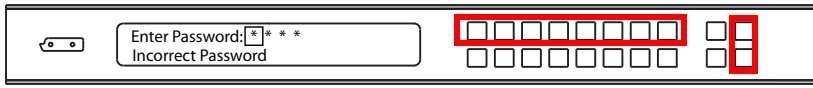
Note the following front panel pushbutton functions:

- Use the **MENU** pushbutton to access the Menu page options: IP Setting, Serial Port Setting, Operation Mode, Security Mode, and Save to a Profile (see *LCD Menu Organization*, page 19).
- Use the **PROFILE** pushbutton to switch between the connection profiles which have been added to the Profile List (see *Profile*, page 52). Pressing this pushbutton for longer than 3 seconds displays the Save to a Profile page (see *Save to a Profile*, page 28).
- Use the **CANCEL** pushbutton to go back to a previous page, return to the Main Screen, stop or exit an operation.
- Use the **ENTER** pushbutton to select options and confirm operations.
- Use the **INPUT / OUTPUT** (**1–8**) pushbuttons to select the Input/Output port. These pushbuttons may also correspond to menu options, connection profiles, and so on.

Enter Password

Upon VM5808H startup, check the front panel LCD to view the loading progress. If the Password screen / LCD Menu fails to load, an error message displays. Reset the unit and try again.

If you are accessing the VM5808H for the first time, the Password screen appears as soon as the LCD loading process is done. Enter the default password 1234 to continue to the Main Screen (see *Main Screen*, page 15).



Additionally, the Password Screen appears if the VM5808H has been configured to require a password for Front Panel operation (see *Security Mode*, page 26).

To enter a password, do the following:

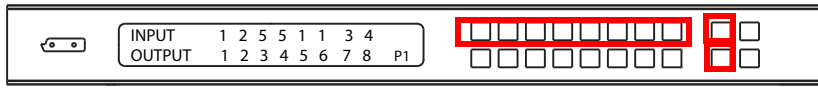
1. In the **Enter Password** field, check that the cursor is at the first asterisk (*) and flashing.
2. Use the front panel Input Port pushbuttons (1–8) to enter the 4-digit password. After the fourth digit has been entered correctly, the Main Screen displays.
3. Press **Cancel** to clear the password. The digits revert to 4 asterisks and the cursor goes back to the first asterisk.

Note: 1. The VM5808H password can be any four digit combination between 1111 to 8888. The default password is 1234.

2. If you enter an incorrect password, the cursor goes back to the first digit and reverts to flashing. The Incorrect Password message displays at the bottom of the screen, but clears as soon as a new password is entered.
3. If Password option is Enabled (see *Security Mode*, page 26), the LCD display time-out is 5 minutes by default.

Main Screen

The Main Screen shows the Input ports in the top row, which are tied to the Output ports shown in sequential order (1–8) at the bottom row.



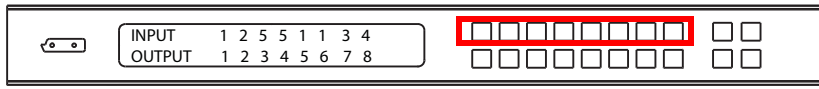
- The front panel pushbutton label (1–8) corresponds to the **Input** ports and **Output** ports on the unit's rear panel.
- Use the **Menu** pushbutton to view the LCD Menu (see *LCD Menu Organization*, page 19).
- Use the **Profile** pushbutton to switch between profile connections (see *Profile*, page 52).

Port Switching

From the Main Screen, users can configure the Input-to-Output port connections to associate an Input source device to an Output display.

Input Port Selection

Use the Input Port pushbuttons to select the Input port you want to configure.



To select which input source displays on each output port, do the following:

1. Press any Input port pushbutton (1–8). The Output port LED(s) tied to the said Input port light(s) up (steady).

   In the example below, pressing Input port **1** shows it is tied to Output ports **1** and **2**.

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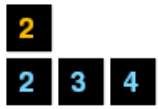
2. To disconnect an Output port from an Input port, press the corresponding Output port pushbutton.

   In the example below, Output port **2** has been disconnected from Input port **1**.

3. To switch to another Input port, press any Input port pushbutton. The Output port LED(s) tied to the said Input port light(s) up (steady).

   In the example below, pressing Input port **2** shows it is tied to Output ports **3** and **4**.

4. To connect Output port **2** to Input port **2**, press the Output port **2** pushbutton. The Output port 2 LED flashes (0.5 sec on, 0.2 sec off). As a result, Input port **2** is now connected to Output ports **2**, **3** and **4**.



Once the signal from the selected Input port is successfully tied to the Output port, the LEDs turn off and the LCD information is updated.

Note: 1. Pressing an Input port a second time deselects it.

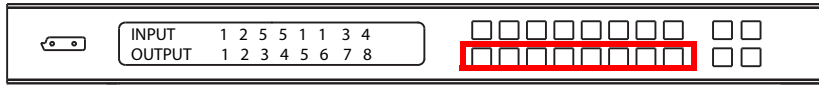
2. Input ports that are not configured or tied to any output port shows **NA** in the LCD screen.

3. Pressing the **Cancel** pushbutton once stops the Input Port Selection operation, and the LCD displays the active setting. Pressing the **Cancel** pushbutton again turns all LEDs off.

4. After 30 seconds of inactivity, all the LEDs turn off.

Output Port Selection

Use the Output Port pushbuttons to select the Output port you want to configure.



To select which output display corresponds to each input source device, do the following:

1. Press any Output port pushbutton (1–8).

   In the example below, Output port **1** pushbutton has been pressed. It is not tied to any Input port.

2. If an Output port pushbutton is pressed a second time, it is deselected and the LED turns off.

3. To connect the selected Output port(s) to an Input port, press the Input port pushbutton. to which you want the Output port(s) tied. The newly selected Input port LED flashes (0.5 sec on, 0.2 sec off), and the LCD information is updated.

   In the example below, pressing Input port **2** ties it to Output ports **2**, **3** and **4**.

4. To switch Output ports **2, 3** and **4** to another Input port (and disconnect it from Input port **2**), press another Input port pushbutton to which you want it tied.

   In the example below, Input port **3** has been pressed and is now connected to Output ports **2**, **3** and **4**.

Note: 1. Pressing an Output port a second time deselects it.

2. Pressing the **Cancel** pushbutton once stops the Output Port Selection operation, and the LCD displays the active setting. Pressing the **Cancel** pushbutton again turns all LEDs off.

3. After 30 seconds of inactivity, all the LEDs turn off.

LCD Menu Organization

The VM5808H has a built-in configuration utility via the front panel LCD, which can be controlled by pressing the **MENU** and front panel Input pushbuttons (1–8). User can cycle through the menu options, starting from IP Setting page, in the order shown in the table below:

Menu Page	Sub-Menu Page(s)		
IP Setting	IP Address		
	Subnet Mask		
	Gateway		
Serial Port Setting	Baud Rate	9600 / **19200** / 38400 / 115200	
Operation Mode	EDID	**Default** / Port1 / Remix / Customized	
	CEC	On / **NA**	
	OSD	**On** / NA	
	Output Status	**On** / NA	
Security Mode	Password	**Enable** / Disable	
	Change Password	Old Password	New Password
Save to a Profile	Save to a Profile No	01–32	

Note: The highlighted values are the default settings of the VM5808H.

Menu Pushbutton

Press the **MENU** pushbutton to switch between the Main Screen and LCD Menu page. When the Menu is active, the MENU pushbutton's built-in LED lights up:

From the Menu page:

- Press **1** to go to the IP Setting page (see *IP Setting*, page 20)
- Press **2** to go to the Serial Port Setting page (see *Serial Port Setting*, page 21)
- Press **8** to go to the next page(s) for the sub-menu pages
- Press **Menu** or **Cancel** to return to the Main Screen

IP Setting

The IP Setting page displays the VM5808H's IP configuration. The values in the LCD Menu are read-only and can be edited via the Browser GUI (*Web Setup*, page 39).

IP Address / Subnet Mask

To view the VM5808H's IP address and Subnet Mask, do the following:

1. From the Menu page, press **1** to see the IP Setting submenu. The IP address and Subnet Mask are then shown.

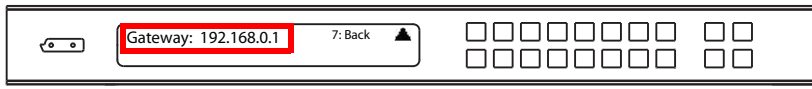
Note: The VM5808H default IP address is 192.168.0.60. The default Subnet Mask is 255.255.255.0

2. Press **8** to go to the next page.
3. Press **Menu** to return to the Menu page.
4. Press **Cancel** to return to the previous page.

Gateway

To view the VM5808H's gateway address, do the following:

1. From the Menu page, press **1** to see the IP Setting submenu, then press **8** to get to the next page. The gateway address displays.



Note: The default Gateway is 192.168.0.1.

2. Press **7** to go to the previous page.
3. Press **Menu** to return to the Menu page.
4. Press **Cancel** to return to the previous page.

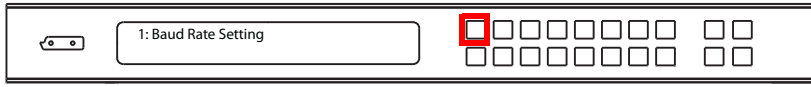
Serial Port Setting

To configure the VM5808H's baud rate for its serial port connection, select Serial Port Setting from the Menu page.

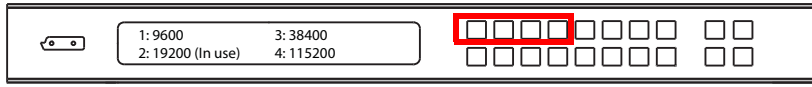
Baud Rate

To set the VM5808H's baud rate, do the following:

1. Select **Baud Rate Setting** from the Serial Port Setting submenu by pressing **1**:



2. Press pushbuttons 1–4 to make your selection.



Baud Rate options are:

- **1:** 9600
- **2**: 19200
- **3**: 38400
- **4**: 115200

Note: The default baud rate is 19200.

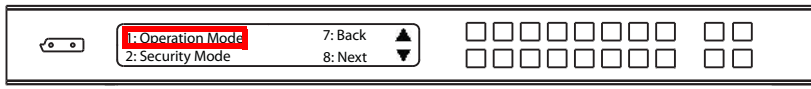
3. Press **Menu** to return to the Menu page.
4. Press **Cancel** to return to the previous step without saving.

Operation Mode

The EDID Mode, CEC, OSD and Output Status features can be configured from the Operation Mode page.

- EDID (Extended Display Identification Data) is used to have the VM5808H automatically apply a preset video configuration or EDID Mode, which utilizes the best resolution across different monitors
- Consumer Electronics Control (CEC) allows interconnected HDMI devices to communicate and respond to one remote control
- The OSD, when enabled for a port, lets an attached display/monitor show real-time port switching information
- The Output Status shows whether the video/audio of an Output port is turned on or off

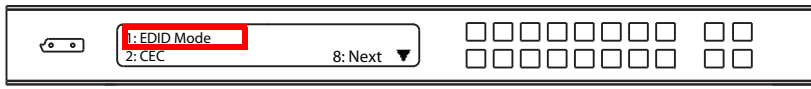
To configure the VM5808H's operation mode settings from the Main Screen, use the **Menu** pushbutton to access the Menu page, press **8** to navigate to the next page, then press pushbutton **1** to access the Operation Mode page.



EDID Mode

To configure the EDID Mode, do the following:

1. From the Operation Mode page, press pushbutton **1**:



(Continues on next page.)

2. Press pushbuttons 1–4 to make your selection.

EDID Mode options are:

EDID Option	Description
1: Port1	The EDID from port1 is passed to all video sources.
2: Default	The default EDID is passed to all video sources.
3: Remix	Uses the EDID of each connected display according to its connection when the VM5808H is first powered on, or immediately after pressing 3 to select the Remix option.
4: Customized	Automatically retrieves and saves the EDID settings of a connected monitor/display device to an input source port. This can be configured using the Browser GUI. See *Customized Mode*, page 44.

3. Press **Menu** to return to the Menu page.
4. Press **Cancel** to return to the previous step without saving.

CEC

To configure the CEC setting, do the following:

1. From the Operation Mode page, press pushbutton **2**:

2. Press pushbuttons 1–8 to enable (**ON**) or disable (**NA**) the CEC feature for the output port. If the port does not support CEC, an **NA** is shown.

Note: The default CEC setting is NA.

3. Press **Menu** to return to the Menu page.
4. Press **Cancel** to return to the previous step without saving.

OSD

The On-Screen Display or OSD feature enables real-time text updates to appear on the display device's screen for any configuration changes made to the Output port via the VM5808H's front panel, IR remote control or Browser GUI.

To configure the OSD setting for each output port, do the following:

1. From the Operation Mode page, press **8** to go to the next page, then press pushbutton **1**:

2. Press pushbuttons 1–8 to enable (**ON**) or disable (**NA**) the OSD feature for the output port.

Note: The default OSD setting is On.

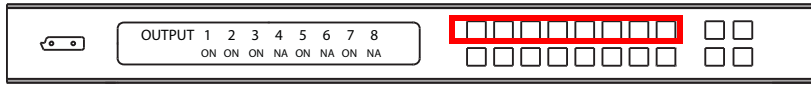
3. Press **Menu** to return to the Menu page.
4. Press **Cancel** to return to the previous step without saving.

Output Status

To configure the Output Status settings for each output port, do the following:

1. From the Operation Mode page, press **8** to go to the next page, then press pushbutton **2**:

2. Press pushbuttons 1–8 to enable (**ON**) or disable (**NA**) the video/audio of the output port.



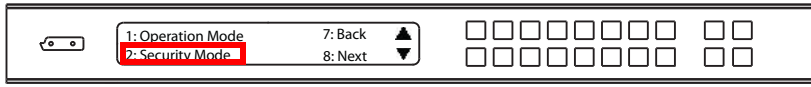
Note: The default Output Status setting is On.

3. Press **Menu** to return to the Menu page.
4. Press **Cancel** to return to the previous step without saving.

Security Mode

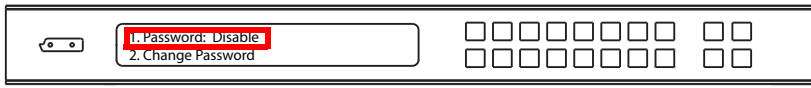
The Security Mode page allows users to manage the VM5808H's password-related settings; the **Password** page configures the VM5808H to require a password for local operation after the LCD display times out or is powered off/on; the **Change Password** option allows users to set a new password for the VM5808H.

To configure the VM5808H's password settings from the Main Screen, use the **Menu** pushbutton to access the Menu page, press **8** to navigate to the next pages, then press pushbutton **2** to access the Security Mode page.

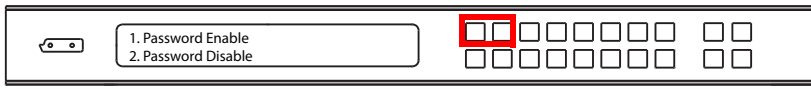


Password

1. To set the VM5808H to require a password for local operation, press pushbutton **1**.



2. To require a password after the LCD display times out or is powered off/on, press pushbutton **1**. Otherwise, press pushbutton **2**.

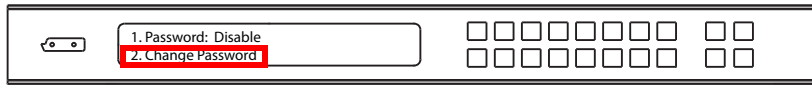


Note: If Password is Enabled, the LCD display's default time-out is 5 minutes.

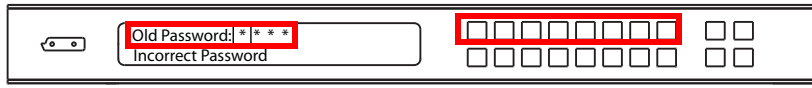
3. Press **Menu** to return to the Menu page.
4. Press **Cancel** to return to the previous step without saving.

Change Password

1. To change the password for accessing the unit, press pushbutton **2**.

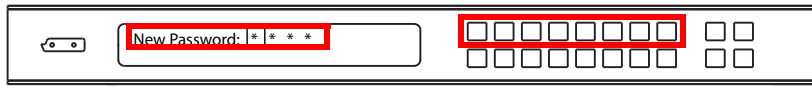


2. In the Old Password field, the cursor flashes at the first digit. Enter the old password (see *Enter Password*, page 14). If the old password is entered correctly, you can proceed to the next step.

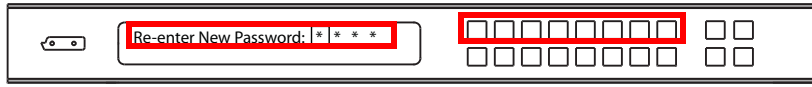


Note: If you entered an incorrect password, an error message appears and the cursor goes back to the first digit (flashing). The Incorrect Password message clears as soon as a new digit is entered.

3. In the New Password field, the cursor flashes at the first digit. Enter the new password using the front panel number pushbuttons (1111–8888).



4. Re-enter the new password in the following screen. The new password is applied by the VM5808H immediately.



If the password you entered does not match the one entered in the previous screen, an error message appears. Enter the new password correctly.

5. Press **Menu** to return to the Menu page.
6. Press **Cancel** to return to the previous step without saving.

Save to a Profile

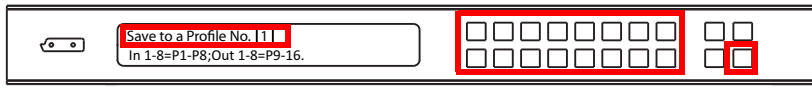
The VM5808H allows users to store up to 32 (numbered P1–P32) different connection profiles that can be saved and recalled later.

The active Input-to-Output port connections on the LCD Main Screen is the configuration saved to a profile. When a user loads a profile, the change is immediate and the profile number is shown on the lower right corner of the LCD screen.

To save a profile once the desired port connections are set, do the following:

1. Press the **Menu** pushbutton to access the Menu page, then **8** to navigate to the next pages. Press pushbutton **1** to open the select Save to a Profile page.

2. In the page that opens, you are asked to give the profile a number. Use the front panel number pushbuttons to select a profile number into which you want to save the configuration.



   Options are P1–P16 (when saving a profile via the LCD), where:

   - Input port pushbuttons **1–8** correspond to Profile **P1** to **P8**
   - Output port pushbuttons **1–8** correspond to Profile **P9** to **P16**

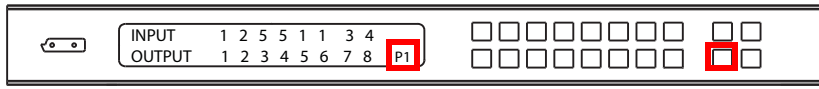
3. Press the **Enter** pushbutton to store the connection configuration – the LCD shows a Profile Saved message.
4. Press **Menu** to return to the Menu page.
5. Press **Cancel** to return to the previous step without saving.

Note: The Save to a Profile page can be accessed quickly by pressing the **Profile** pushbutton for longer than 3 seconds.

Profile Pushbutton

The **PROFILE** pushbutton lets users conveniently switch between connection profiles that have been saved or added to the Profile List (see *Profile*, page 52).

If a Profile is in use, its profile number (P1–P32) is shown on the lower right corner of the LCD display.



The Profile pushbutton functions as follows:

- Press the Profile pushbutton for 1–2 seconds to cycle between profiles stored in the GUI's Profile List (from 1 up to 32, depending on how many are added to the list)
- Alternatively, after pressing the Profile pushbutton (lights), use the Input/ Output pushbuttons to switch to a specific profile (from P1 to P16 only). Note that:
  - **Input** ports **1–8** correspond to Profile **P1** to **P8**
  - **Output** ports **1–8** correspond to Profile **P9** to **P16** (where Output Port 1=Profile 9, Output Port 2=Profile 10... Output Port 8=Profile 16)

  The selected pushbutton lights steady, and the VM5808H immediately applies the port connections configured in the selected profile.
- When the Profile pushbutton is pressed for 3 seconds or more, the LCD directs to the Save to a Profile page (see *Save to a Profile*, page 28)

Press the **Cancel** pushbutton to turn off the Profile LED

Note: If there are no profiles configured on the VM5808H device, an error message "*No Profile List defined. Profile List can be edited via the Web GUI*" is displayed when the Profile pushbutton is pressed.

A Profile's port connections can be edited using the front panel pushbuttons (see *Port Switching*, page 15) or via the *Connections* page of the Browser GUI (see *Main Page*, page 34). Additionally, the Profile List can be configured via the Profile page of the Browser GUI (see *Profile*, page 52).

IR Remote Control Operation

The IR remote control (*IR Remote Control*, page 7) included with the VM5808H can be used to:

- change the Input source of any Output display
- power on/off individual Output displays; or
- power on/off all Output displays simultaneously

Before using the remote control, a user must first plug the IR External Receiver into the rear panel of the VM5808H and place the receiver where the IR signal can be reached (see *IR Port*, page 6).

Change the Input source of an Output display

To change the Input source of an Output display, using the remote control, do the following:

1. Press the **Output** port number (**1–8**) you want to change.
2. Within 2 seconds press the **Input** port number (**1–8**) you want the Output port to display.*
3. Repeat steps 1-2 to change additional ports.

*For the change to occur the Input number must be pressed within 2 seconds of pressing the Output number.

Power on/off individual Output displays

To power on/off individual Output displays, using the remote control, do the following:

1. Press the **Output** port number (**1–8**) you want to power on/off.
2. Within 2 seconds press the **ON** or **OFF** pushbutton.*
3. Repeat steps 1-2 to change the power status back on/off.

*If the **ON** or **OFF** pushbutton is pressed *after* 2 seconds of pressing the Output port number, all the displays are powered on or off instead of just the intended Output port.

Power on/off all Output displays

To power on/off all Output displays simultaneously, with the remote control, do the following:

1. Press the **ON** or **OFF** pushbutton.*
2. Repeat step 1 to simultaneously change back the power status of all Output ports, to on or off, respectively.

*The **ON** or **OFF** pushbuttons bring all displays to the same power status, regardless of the individual power statuses.

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Chapter 4
System Operation

Overview

The VM5808H 8 x 8 HDMI Matrix Switch with Scaler can be configured and controlled over a standard TCP/IP connection via a built-in Graphical User Interface (GUI). Because the VM5808H can be accessed from anywhere on the LAN or WAN (i.e., Internet), remote operators can easily log in via any Web browser. Security is ensured by password protection and user-configurable time-out. The VM5808H supports three levels of remote users with various operational privileges, and up to 32 users can log into the GUI at one time. For full details, see the sections that follow.

Logging In

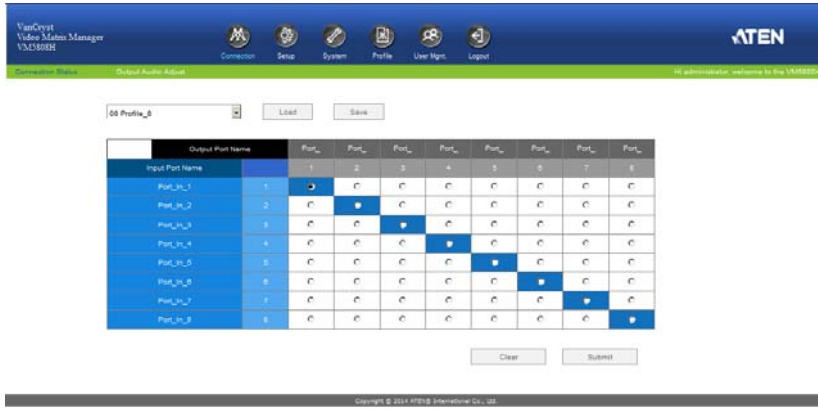
To access the Browser GUI, type the VM5808H's IP address into the address bar of any browser. If a Security Alert dialog box appears, accept the certificate – it can be trusted. The welcome screen appears:

- The VM5808H's default IP address is http://192.168.0.60. See *Setup*, page 38, for further information
- The default username and password are: administrator/password. See *User Management*, page 54, for further information
- Click **Login** to log in, and **Reset** to clear the fields
- The same user can not be logged in simultaneously

Note: The VM5808H username supports lower case letters only.

Main Page

The VM5808H GUI's Main Page is the Connection Status page. This page displays all active connections:



The toolbar at the top panel contains icons that links to the various pages of the GUI, as follows:

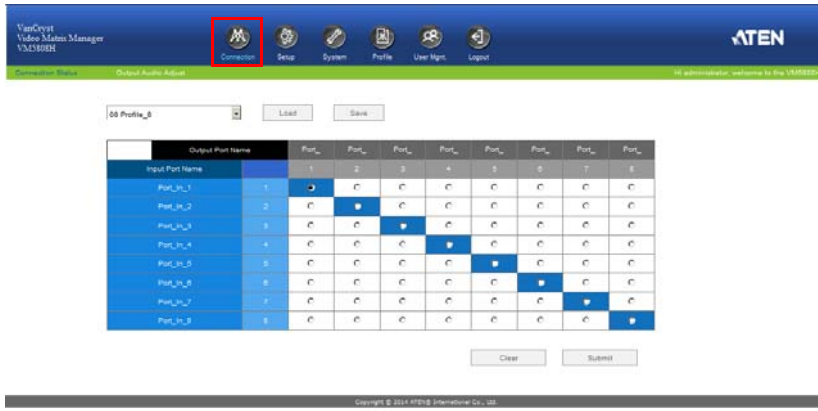
Icon		Description
	Connection	This page displays the VM5808H's active connections and enables you to control them.
	Setup	This page enables you to configure the VM5808H's IP settings, serial settings, port names, EDID mode and video processing mode.
	System	The page enables you to upgrade the VM5808H's firmware.
	Profile	This page allows you to add, delete and name port connection configurations for easy Profile selection using the front panel PROFILE pushbutton.
	User Management	This page enables you to add, edit and delete user information, permissions, and passwords.
	Logout	This icon ends the session and closes the Web interface.

Clicking the icons also leads to various sub-pages, and you can cycle through the Browser GUI menu options in the order shown in the table below:

Menu Page	Sub-Menu Page(s)
Connection	Connection Status
	Output Audio Adjust
Setup	Web
	System
	Port Name
	EDID Mode Setting
	Video Processing Mode
System	Firmware Upgrade
Profile	Selection
	Name
User Management	User Management

Connection

The *Connection* icon leads to the Connection Status page, where you can configure port connections and save them to a Profile (*Profile Selection*, page 52). The VM5808H allows you to store up to 32 (numbered 01–32) differently configured connection profiles that can be saved and recalled later by either connection method: locally via the unit's front panel pushbuttons (*Profile Pushbutton*, page 29) and over IP via the GUI. This page also links to the Output Audio Adjust page (*Output Audio Adjust*, page 37).



Connection Status

The Connection Status Page has a drop-down menu, which allows you to quickly save port connection configurations and load stored connection profiles.

It also has a table to easily configure Input-to-Output port connections. This page can be configured as follows:

1. Select the radio button at the corresponding intersection of the input/ output ports you want to connect – this ties up an input source to an output display.

   Note: Multiple connections can be changed simultaneously; simply select all the connections you want to configure.

2. Click the **Submit** button. The display reloads with the new status changes. Or, click the **Clear** button to revert to the stored configuration.

3. To store the current port connections into a profile, select the Profile Number / Name from the drop-down menu into which you want to save the configuration and click **Save**.

4. Use the drop-down list to select a stored connection profile and then click the **Load** button to switch to that profile.

Note: The default profile is 01 Profile_1.

Status Colors

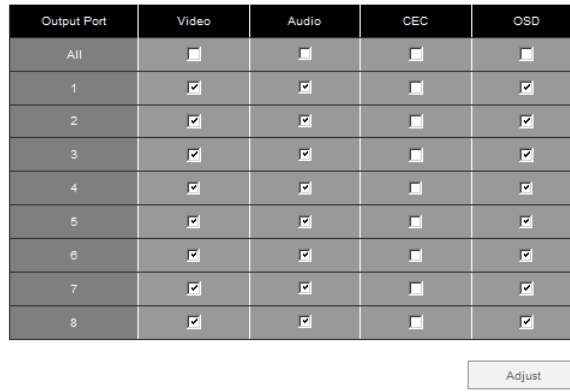
Connections display in colors to indicate their status, as follows:

- **Blue** – Connected
- **White** – Not Connected

Note: The latest connections will load automatically when the VM5808H is reset.

Output Audio Adjust

The Output Audio Adjust page lets you select which features (*Video, Audio, CEC* and *OSD*) are active for each Output port.

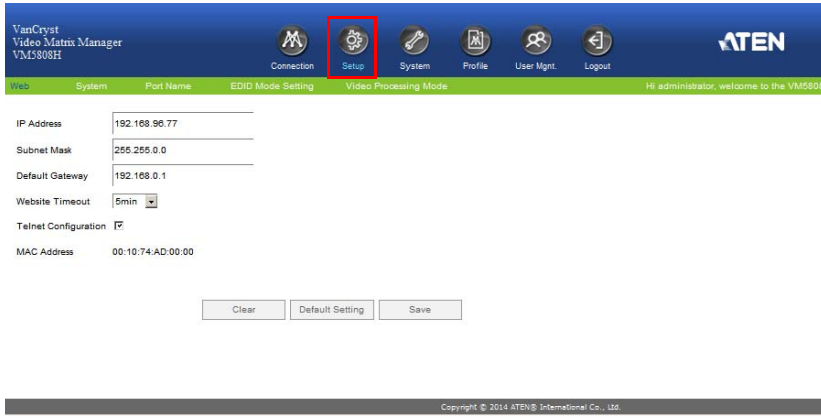


- For each output port (1–8), put a check mark at the corresponding feature to enable it for the port
- Leave the correspoding box blank or uncheck it to disable the feature for the port
- Click **Adjust** to have the VM5808H apply the changes

Setup

The *Setup* icon leads to the Web setup page, where you can configure the VM5808H's IP settings.

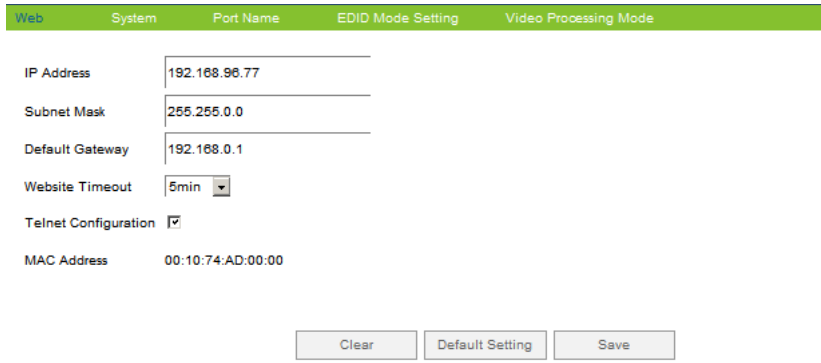
It also links to the System setup page (*System Setup*, page 40), Port Name page (*Port Name*, page 41), EDID Mode Setting page (*EDID Mode Setting*, page 42) and Video Processing Mode page (*Video Processing Mode*, page 50).



The proceeding sections further discusses the Setup screens.

Web Setup

The Web settings lets users configure the VM5808H's IP settings for connecting to the device via a browser GUI, as well as enabling/disabling Telnet.



Enter the values required in the screen, then click **Save**. Changes may take a few seconds and automatically redirect you to the IP address specified.

Or, click the **Clear** button to revert to the stored configuration.

Click **Default Setting** to use the following default values:

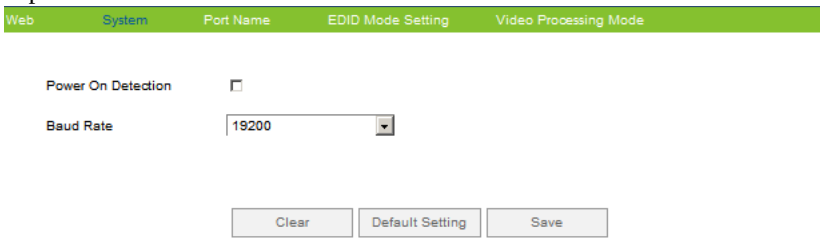
- IP Address – 192.168.0.60
- Subnet Mask – 255.255.255.0
- Default Gateway – 192.168.0.1
- Website Timeout* – 5 minutes
- Telnet Configuration enabled (checked)

***** This option controls how long an inactive web connection stays logged into the VM5808H. Any changes will take effect immediately.

System Setup

The System page lets users enable/disable the VM5808H's Power On Detection feature, as well as set the baud rate for the serial connection.

Enabling Power On Detection means that the VM5808H automatically switches to the next powered on device when one of the HDMI source devices is powered off.



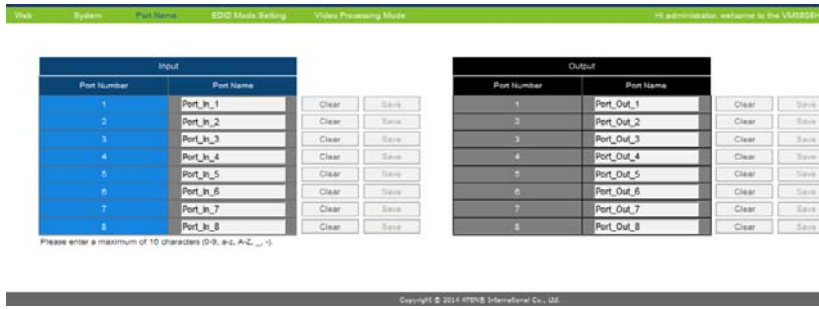
- Check the box to enable the Power On Detection feature, and leave it blank to disable it
- Use the drop-down menu to select the Baud Rate for the serial connection
- Click **Save** for the changes to take effect
- Or, click the **Clear** button to revert to the stored configuration

Click **Default Setting** to use the following default values:

- Power On Detection disabled (unchecked)
- Baud Rate – 19200

Port Name

The Port Name page lets Administrators and Super Users change the name of Input and Output ports for easy identification.



- To name an Input/Output port, enter a descriptive name of up to 16 characters (including 0-9, a-z, A-Z, _, -) in the corresponding field and click **Save**
- To change an Input/Output port's name, enter another value and click **Save**
- Click **Clear** to revert to the previously stored name

Note: The Input and Output port names can be the same.

EDID Mode Setting

The EDID Mode Setting page lets users view and select an EDID Mode so that the VM5808H can use the best resolution for its display(s).

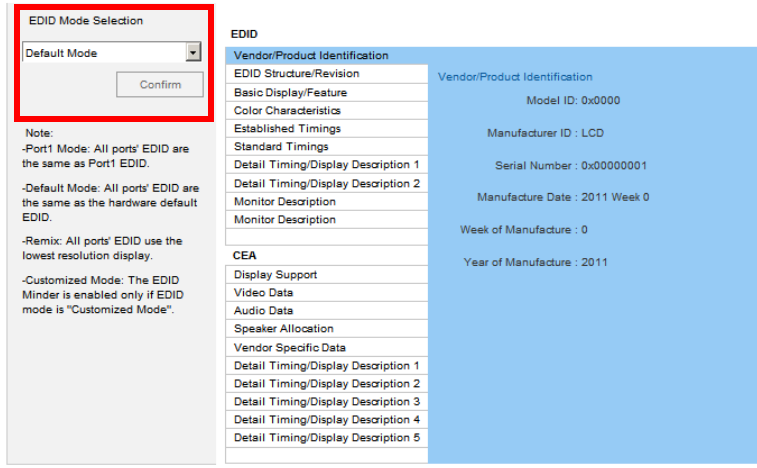
Note: The EDID Mode can also be selected via the Front Panel pushbuttons – see *EDID Mode*, page 22.

Extended Display Identification Data (EDID) is a data format that contains a display's basic information and is used to communicate with the video source/ system.

In the left-most panel of the page, users can select a preconfigured EDID Mode from the **EDID Mode Selection** drop-down menu. Options are:

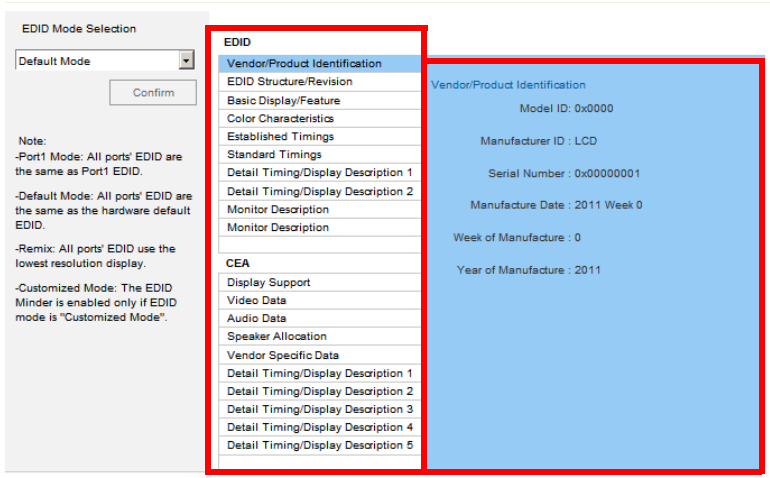
- Port 1 Mode
- Default Mode
- Remix

Users can also configure and store an EDID Mode aside from the pre-configured modes available (see Customized Mode, see page 44).



Select the EDID Mode you want to use and click **Confirm**. The VM5808H uses the settings configured for that EDID mode.

The right panel of the screen lets users view the configuration of the EDID Modes selected:

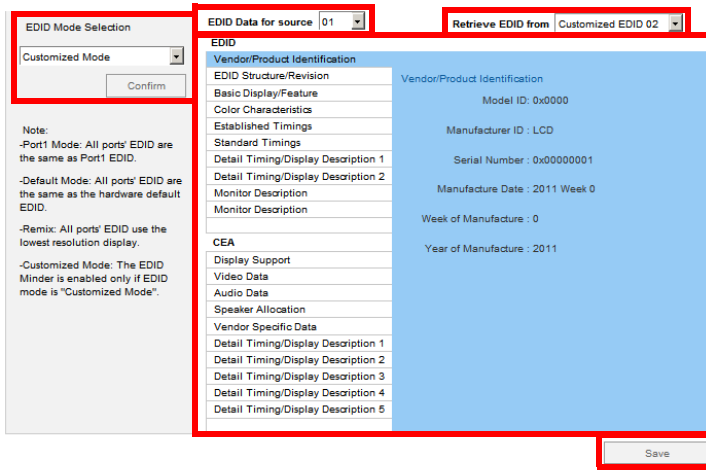


- From the left column, click the option that you want to view and/or edit. There are two categories: **EDID** (Extended Display Identification Data) and **CEA** (Consumer Electronics Association)
- When you highlight the menu items on the left column, the right column displays the current settings for the corresponding EDID configuration. Some of the screens are read-only

See *EDID Settings*, page 45 for more information on these two columns.

Customized Mode

Use the Customized Mode to automatically retrieve and save the EDID settings of a connected monitor/display device to an input source port.



- In the left-most panel of the page, select **Customized Mode** from the EDID Mode Selection drop-down menu and click **Confirm**
- **EDID Data for source**: Select into which input source port you want to store the EDID configuration (01–08)
- **Retrieve from EDID**: Retrieve and view the EDID settings of a stored EDID configuration (Customized EDID 01-08)

  -or-

  the Default Customized EDID
- The right panel displays a summary of the acquired EDID settings. Click **Save** to use the configuration for the duration of the session

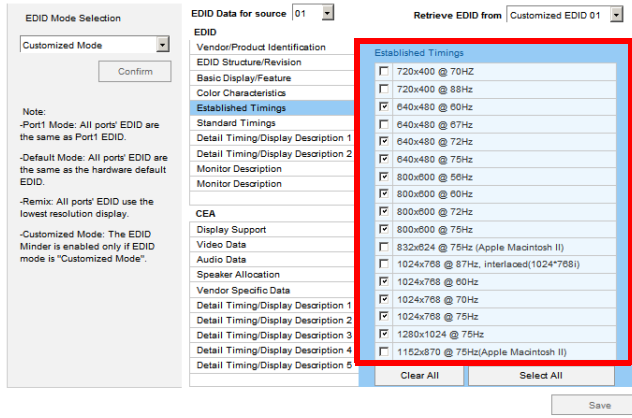
EDID Settings

The EDID structure is comprised of 128 bytes in total – each heading shown in the left column corresponds to a specific number of bytes.

The pages for the pre-configured EDID Modes (Port 1, Default and Remix) cannot be edited. The pages for the Customized EDID, which can be edited, are discussed in the proceeding sections:

Established Timings

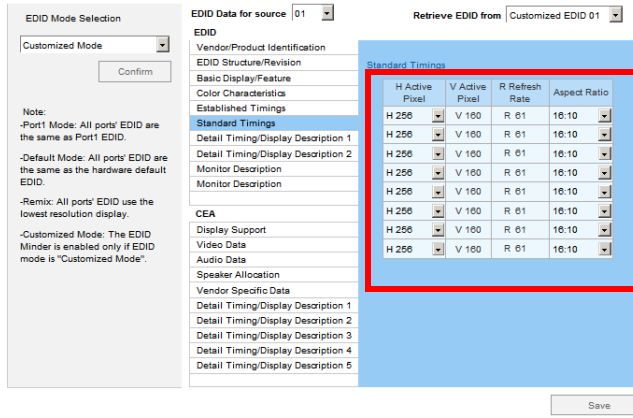
This page lists video resolutions/timings that display devices can support.



- Select the resolution(s) you want to use for the attached monitor/ display device
- Click **Clear All** to deselect all the items
- Click **Select All** to check all the items
- Click **Save** to apply the changes

Standard Timings

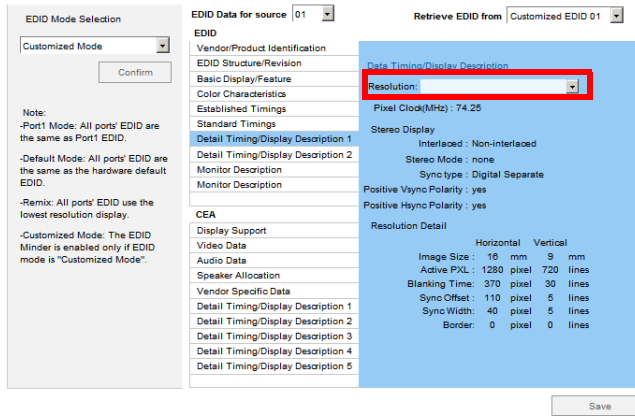
This page shows eight resolutions/timings that display devices can support in addition to those listed in the Established Timings page.



- Select the *H Active Pixel* from the drop-down menu
- Select the *Aspect Ratio* from the drop-down menu
- Click **Save** to apply the changes

Detail Timing / Display Description

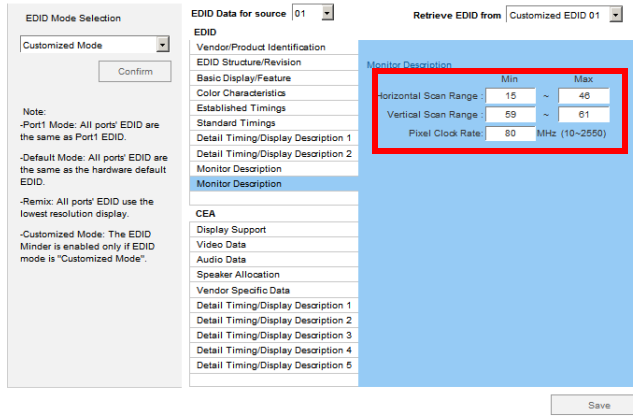
This screen gives more video resolution options, and provides resolution/ timing details.



In the drop down menu, choose a resolution with values that fit the attached monitor/display device and click **Save**.

Monitor Description

This screen lets you specify the viewing specifications, namely horizontal and vertical scan ranges and pixel clock rate, of your monitor/display device.



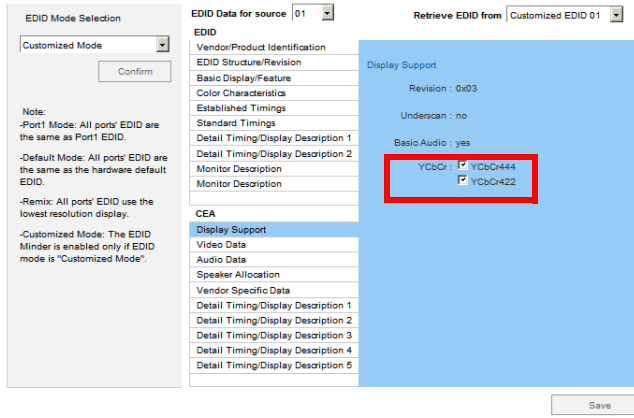
Enter the values that correspond to your device and click **Save** to apply the changes.

CEA Settings

CEA is an extension data of the EDID structure, which further extends the standard definitions of EDID to support advanced features of monitors/display devices.

Display Support

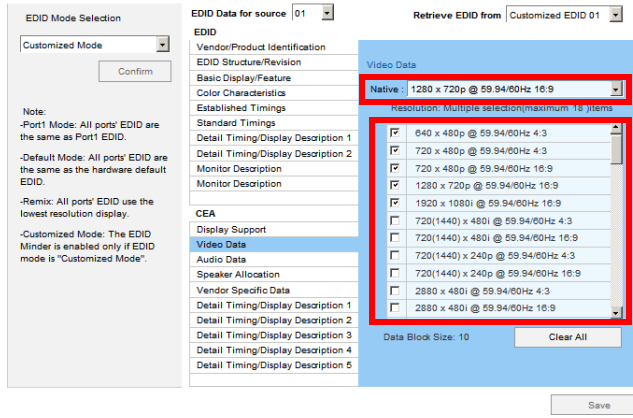
This screen describes the display's basic digital components.



Select the YCbCr mode applicable to your display and click **Save**.

Video Data

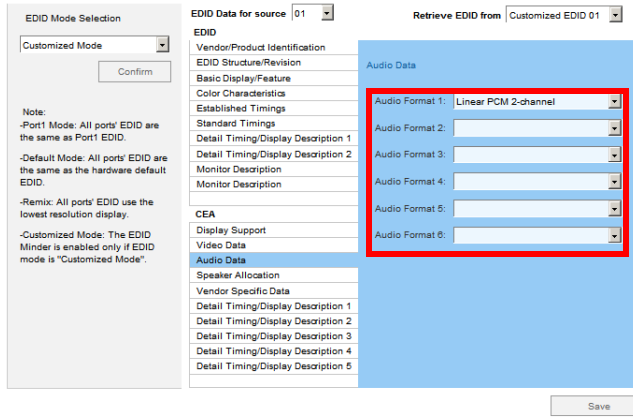
This screen lists additional video resolution/timing displays that may be supported by other devices, other than PC monitors (for example, 1080i).


EDID Mode Selection
Customized Mode
Confirm
Note:
-Port1 Mode: All ports' EDID are the same as Port1 EDID.
-Default Mode: All ports' EDID are the same as the hardware default EDID.
-Remix: All ports' EDID use the lowest resolution display.
-Customized Mode: The EDID Minder is enabled only if EDID mode is "Customized Mode".
EDID Data for source 01
Retrieve EDID from Customized EDID 01
EDID
Vendor/Product Identification
EDID Structure/Revision
Basic Display/Feature
Color Characteristics
Established Timings
Standard Timings
Detail Timing/Display Description 1
Detail Timing/Display Description 2
Monitor Description
Monitor Description
CEA
Display Support
Video Data
Audio Data
Speaker Allocation
Vendor Specific Data
Detail Timing/Display Description 1
Detail Timing/Display Description 2
Detail Timing/Display Description 3
Detail Timing/Display Description 4
Detail Timing/Display Description 5
Video Data
Native : 1280 x 720p @ 59.94/60Hz 16:9
Resolution: Multiple selection(maximum 18)items
640 x 480p @ 59.94/60Hz 4:3
720 x 480p @ 59.94/60Hz 4:3
720 x 480p @ 59.94/60Hz 16:9
1280 x 720p @ 59.94/60Hz 16:9
1920 x 1080i @ 59.94/60Hz 16:9
720(1440) x 480i @ 59.94/60Hz 4:3
720(1440) x 480i @ 59.94/60Hz 16:9
720(1440) x 240p @ 59.94/60Hz 4:3
720(1440) x 240p @ 59.94/60Hz 16:9
2880 x 480i @ 59.94/60Hz 4:3
2880 x 480i @ 59.94/60Hz 16:9
Data Block Size: 10
Clear All
Save

- Select the native resolution of the attached display device
- Select the resolutions that work with the attached monitor/display device
- Click **Clear All** to deselect all the items
- Click **Save** to apply the changes

Audio Data

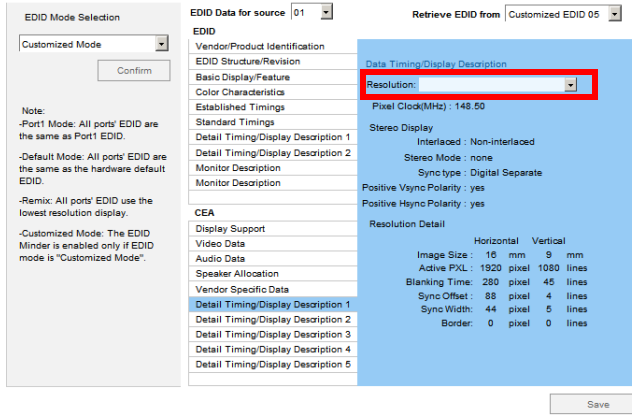
This screen lets you select advanced audio configurations for your device.



Use the drop down menu to select the **Audio Format** (1~6) applicable to your audio output device, and click **Save** to apply the changes.

Detail Timing / Display Description

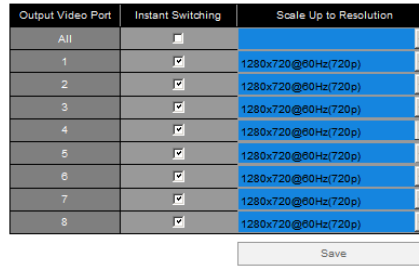
This screen gives more video resolution options, and provides resolution/ timing details (in addition to those specified in the EDID structure).



In the **Resolution** drop down menu, choose a resolution with values that fit the attached monitor/display device and click **Save**.

Video Processing Mode

The Video Processing Mode page lets users enable or disable Instant Switching for the Output Video Ports (1–8), as well as scale up the port's video resolution.



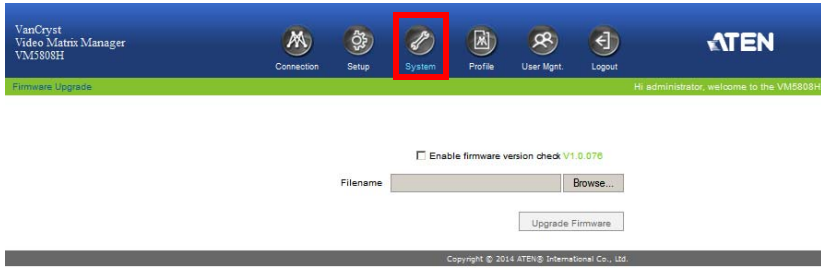
- **Instant Switching** (also known as **Seamless Switching**): Check the corresponding box if you want to enable Seamless Switching* for the output video port

Note: If Seamless Switching is enabled, the video output will not display 3D, Deep Color or interlace resolution (i.e., 1080i) features. To avail of these features, you must disable Seamless Switching.

- **Scale Up to Resolution**: Use the drop-down menu to select the resolution you want the output video port to use
- Click **Save** to apply the changes

System

The *System* icon opens the Firmware Upgrade page, which lets users view information about the VM5808H's firmware version and upgrade it, if needed. This is an Administrator function only.



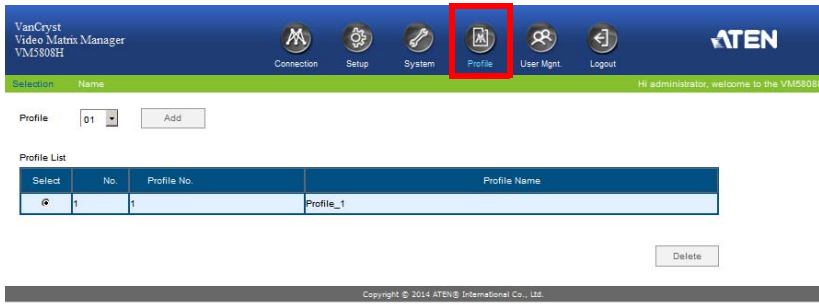
To upgrade the VM5808H's firmware, do the following:

1. Use the **Browse...** button to locate the firmware upgrade file. Make sure you have the correct file saved in your local PC.
2. Click **Upgrade Firmware** to start the upgrade.

Note: Check the box to enable the utility to compare the VM5808H's current firmware version with that of the upgrade file. If it finds that the VM5808H's firmware version is the same or higher than the selected upgrade version, it brings up a dialog box informing you of the situation and gives you the option to *Continue* or *Cancel*.

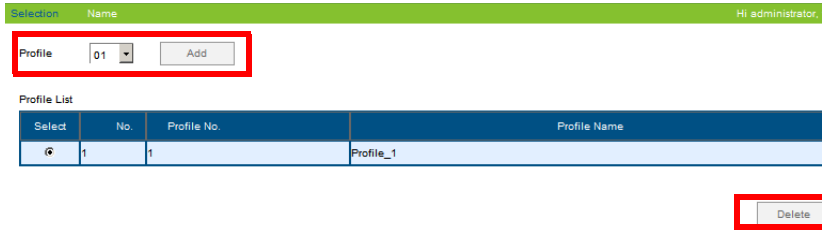
Profile

The *Profile* icon opens the Profile Selection page, which allows users to add, delete and name up to 32 connection profiles, which can be called using the VM5808H front panel Profile pushbutton (see *Profile Pushbutton*, page 29).



Profile Selection

Once you have added connection profiles to the **Profile List**, simply press the front panel Profile pushbutton to switch between the stored profiles.



To Add a profile to the Profile List, do the following:

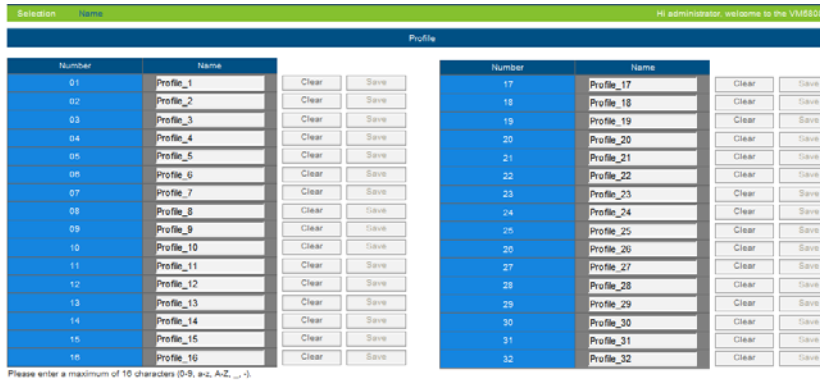
1. From the **Profile** drop-down menu, select the connection profile (01-32) you want to add to the list.
2. Click the **Add** button. By default new profiles are added to the bottom of the Profile List.

To Delete a connection profile from the Profile List, do the following:

1. Select the radio button of the profile you want to delete.
2. Click the **Delete** button.

Profile Name

The Profile Name page lets Administrators and Super Users change the name of the profile connections in the Profile List for easy identification.



- To name a profile, enter a descriptive name of up to 16 characters (including 0-9, a-z, A-Z, _, -) in the corresponding field and click **Save**

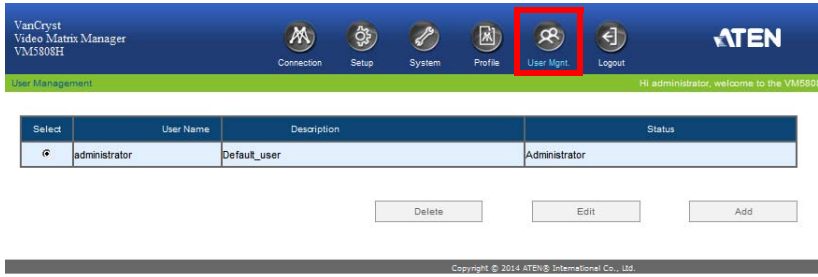
Note: Enter the name and click save one profile at a time.

- To change a profile name, enter another value and click **Save**
- Click **Clear** to revert to the previously stored name

User Management

The User Management (Mgnt) icon opens User Management page, which lets users add, edit, or delete user information, and change the password for accessing the VM5808H's GUI.

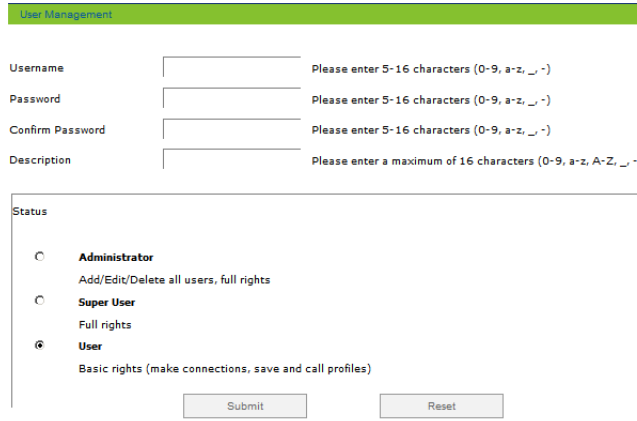
Note: This is an Administrator only function.



- **Add** – Click the Add button to add another user to the list. The VM5808H supports up to 32 users at one time. See page 55 for more details
- **Edit** – Use the radio button to select a user and click the Edit button to change the information. This option allows an Administrator to rename the user, set/reset the selected user's password, add a description of the user, and to set the user's privileges. See page 55 for more details
- **Delete** – Use the radio button to select the user and click the Delete button to remove the user and all user information attached to the account

Add / Edit User

Use the Add / Edit User page to name a user, set the user's password, add a user description, and set the user's Status (see *Privileges*, page 56) for accessing the VM5808H's GUI.



- Fill in the user name or edit an existing one
- Enter a password and re-type the password to confirm

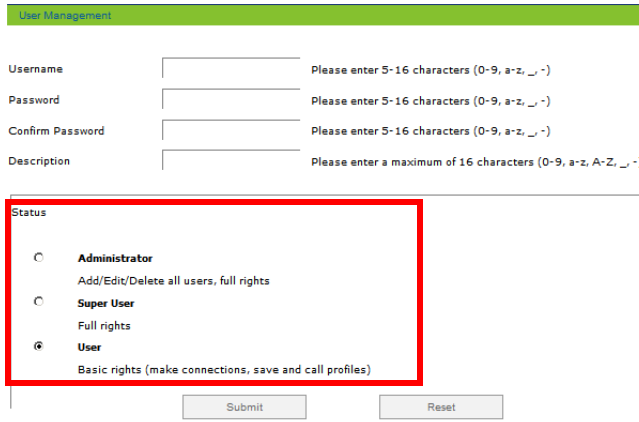
Note: Usernames and passwords are case sensitive, and must be 5–16 alphanumeric characters.

- Add or edit the description for the user
- Select the status that you want to grant the user (see *Privileges*, page 56)
- Click **Submit** to save the data
- Click **Reset** to clear all the fields or revert to the last-saved values

If a user is logged from the VM5808H's GUI, their user settings cannot be edited, and the fields in this screen are grayed out.

Privileges

At the bottom of the Add/Edit User page is the Status section, which can be used to set a user's privileges.



The three available privilege levels are as follows:

- **Administrator** – this level provides full access and control of the VM5808H functions, in addition to full User Management privileges
- **Super User** – this level provides full access and control with no User Management privileges
- **User** – this level provides basic functions only (create connections, save and recall presets)

Telnet Operation

The VM5808H can be operated and configured via a remote terminal session using Telnet.

To log into the VM5808H by means of a Telnet session, do the following:

1. On your computer, open a terminal (command line) session.
2. At the prompt, key in the VM5808H's IP address in the following way:

   ```
   telnet [IP address]:23
   ```

3. Press **Enter**. The login screen appears. At the login prompt, provide your Username and Password.

Note: If a user logs on using a Username that is already in session, the newest login takes effect and the previous session is replaced.

Configuration Menu

Once a Telnet connection to the VM5808H is established, the device's text-based Configuration Menu comes up, with the following items:

1. H – Call up the command list for help

Command list:

GT – Set gateway address

IM – Set IP subnet mask

IP – Set IP address

LO – Load connections from profile *nn*

PW – Change password

RI– Read what output is connected to *nn* input

RO – Read what output is connected to *nn* input

SB – Set the serial port baud rate

SS – Switch input to specified port

SV – Save the current connections into profile *nn*

TI – Set timeout

VR – Software version information

Ctrl-Q – Quit

2. GT – Set gateway address

```
GT
```

Old gateway address: 192.168.0.1

New gateway address:

3. IM – Set IP subnet mask

```
IM
```

Old IP subnet mask: 255.255.255.0

New IP subnet mask:

4. IP – Set IP address

```
IP
```

Old IP address: 192.168.0.60

New IP address:

5. LO – Load connections from profile

```
LO 01
```

Load profile 01 OK.

6. PW – Change password

```
PW
```

Old password: ********

New password:

7. RI – Read what input is connected to *nn* output

```
RI 01
```

Output port 02 04 08 is connected input port 01

8. RO – Read what output is connected to *nn* input

```
RO 01
```

Input port 02 is connected to output port 01

9. SB – Set serial port baud rate

```
SB 96
```

Serial port baud rate is set to 9600

10. SS – Switch input to specified output

```
SS 01,03
```

Switch input 01 to output 03 (00: Local Port)

11. SV – Save the current connections into a profile

```
SV 01
```

Save the current connections into profile 01

12. TI – Set timeout

```
TI 30
```

Set 30 minute timeout

13. VR – Software version information

```
VR
```

Software version 1.0.

Note: For further information about these functions, please reference the equivalent Browser GUI functions earlier in this chapter.

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Chapter 5
RS-232 Commands

Serial Control Protocol Commands

The VM5808H's built-in bi-directional RS-232 serial interface allows system control through a high-end controller or PC.

Configuring the Serial Port

The controller's serial port should be configured as follows:

Baud Rate	19200
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

Switch Port Commands

The formula for Switch commands is as follows:

Switch Command + Input Command + Port Number + Output Command + Port Number + Control [Enter]

1. For example, to switch input port 02 to output port 05, type the following:
   sw i02 o05 [Enter]
2. To switch output port 04 to the next port, input the following:
   sw o04 + **[Enter]**
3. To turn off video output on port 03, type the following:
   sw o03 off [Enter]

The following tables show the possible values and formats for the Input/Output command, Port Number and Control:

Command	Description
sw	Switch command

Input Command	Description
i	Input command

Port number	Description
xx	01-08 port

Output Command	Description
o	Output command

Port number	Description
yy	01-08 port
*	All output ports

Control	Description
on	Turn on the display
off	Turn off the display
+	Next Port
-	Previous Port

Note: By default, input port 01 is tied to output port 01; input port 02 is tied to output port 02; and so on until port 08 (i.e., o01 i01, o02 i02… o08 i08)

The following table shows the available command list:

Command	Input Command	Input Port	Output Command	Output Port	Control	Enter	Description
sw	i	xx	o	yy *		[Enter]	Switch Input Port xx to Output Port yy (xx:01~08, *; yy:01~08, *)
sw			o	yy *	on off	[Enter]	Turn on Output Port yy Turn off Output Port yy (yy:01~08, *)
sw			o	yy *	+ -	[Enter]	Switch Output port yy to next Output port. Switch Output port yy to previous Output port. (yy:01~08, *)

Note: 1. Each command string can be separated with a space.

2. The **Port Number** command string can be skipped, and the default value will be used.

EDID Commands

Extended Display Identification Data (EDID) is a data format that contains a display's basic information and is used to communicate with the video source/ system. You can set which EDID mode the VM5808H uses with the following command:

EDID Command + Control (port1 / remix / default) [Enter]

For example, to use the Port1 EDID mode, type the following:

edid port1 [enter]

The following tables show the possible values and formats for the **Control** command:

Command	Description
edid	Enable EDID selection

Control	Description
port1	Implement the EDID of the connected display to Port 1, and pass it to the video source
remix	Implement the EDID of each connected display according to its connection when the VM5808H is first powered on, or immediately after selecting the Remix option
default	Implements ATEN's default EDID (default)

Note: Each command string can be separated with a space.

The following table shows the available command list:

Command	Control	Enter	Description
edid	port1	[Enter]	The EDID from Port 1 is passed to the video source
edid	remix	[Enter]	The VM5808H implements the EDID of each connected display according to its connection when the VM5808H is first powered on, or immediately after selecting the Remix option.
edid	default	[Enter]	ATEN's default EDID is passed to the video source

Mute Commands

Enable or disable audio coming from the output port(s) using the following command:

Mute Command + Output Command + Port Number + Control (On / Off) [Enter]

For example, to mute the audio coming from output port 1, type the following:

mute o01 on [enter]

The following tables show the possible values and formats for the **Control** command:

Command	Description
mute	Enable / Disable audio of HDMI output port

Output Command	Description
o	Output command

Port number	Description
yy	01-08 port (default is 01)
*	All output ports

Control	Description
on	Mute on; audio from HDMI output port is disabled
off	Mute off; audio output enabled (default)

Note: 1. Each command string can be separated with a space.

2. Skip the output port command to mute or enable the audio of all output ports.

The following table shows the available command list:

Command	Output Port	Control	Enter	Description
mute	yy *	on	[Enter]	Audio on for output port yy (yy:01~08, *)
mute	yy *	off	[Enter]	Audio off for output port yy (default) (yy:01~08, *)

CEC Commands

Consumer Electronics Control (CEC) allows interconnected HDMI devices to communicate and respond to one remote control. The formula for CEC mode selection commands is as follows:

CEC Command + Output Command + Port Number + Control (Off / On) [Enter]

For example, to enable CEC function on output port 1, type the following:

cec o01 on [enter]

The following tables show the possible values and formats for the **Control** command:

Command	Description
cec	CEC control

Output Command	Description
o	Output command

Port number	Description
yy	01-08 port (default is 01)
*	All output ports

Control	Description
off	Disable CEC (default)
on	Enable CEC

Note: Each command string can be separated with a space.

The following table shows the available command list:

Command	Output Port	Control	Enter	Description
cec	yy *	off	[Enter]	CEC off for output port yy (default) (yy:01~08, *)
cec	yy *	on	[Enter]	CEC on for output port yy (yy:01~08, *)

Power On Detection

Enabling Power On Detection means that the VM5808H automatically switches to the next powered on device when one of the HDMI source devices is powered off.

The formula for Power On Detection commands is as follows:

Power On Detection + Control command [Enter]

For example, to turn on the Power On Detection feature, input the following:

pod on [Enter]

The following tables show the possible values for the **Control** string:

Command	Description
pod	Power On Detection command

Control	Description
on	Turn on Power On Detection
off	Turn off Power On Detection (default)

Note: Each command string can be separated with a space.

Read

The Read command enables you to view information from the device using the following command:

Read Command [Enter]

1. To Reads and displays information from the device, type:

   read [Enter]

The following table show the possible values and formats for the command:

Command	Description
read	Reads and displays information from the VM5808H

Reset

You can reset the VM5808H to default factory settings. The formula for the Reset command is as follows:

Reset Command [Enter]

The following tables show the possible values and formats for the **Command** command:

Command	Description
reset	Reset the device settings

The following table shows the available command list:

Command	Enter	Description
reset	[Enter]	Reset the device settings

Note: Each command string can be separated with a space.

Baud Rate Setting

You can select the RS-232 Baud Rate you want the VM5808H to use. Options are 9600, 19200 (default) 38400 and 115200.

The formula for Baud Rate setting command is as follows:

Baud Command + Control [Enter]

For example, to select 38400 as your baud rate, type the following:

baud 38400 [enter]

The following tables show the possible values and formats for the **Control** command:

Command	Description
baud	Sets the RS-232 baud rate

Control	Description
9600	Use 9600 baud rate
19200	Use 19200 baud rate
38400	Use 38400 baud rate
115200	Use 115200 baud rate

Note: Each command string can be separated with a space.

The following table shows the available command list:

Command	Control	Enter	Description
baud	9600 / 19200 / 38400 / 115200	[Enter]	Sets the RS-232 baud rate

Save/Load Profile Commands

The formula for Save/Load Profile commands is as follows:

Command + Profile + Number + Control + [Enter]

For example, to save the current connection configuration to profile 02, type the following:

profile f 02 save [Enter]

The following tables show the possible values for commands:

Command	Description
profile	Save / Load profile

Profile	Description
f	Profile (number)

Profile Number	Description
yy	01-32 (default is 01)

Control	Description
save	Save the current connection configuration
load	Load a saved profile

Note: Each command string can be separated with a space.

OSD Commands

Enable or disable the On-Screen Display (OSD) using the following command:

OSD Command + Control (On / Off) [Enter]

For example, to mute the audio, type the following:

osd on [enter]

The following tables show the possible values and formats for the **Control** command:

Command	Description
osd	Enable / Disable OSD

Control	Description
on	OSD is enabled (default)
off	OSD is disabled

Note: Each command string can be separated with a space.

The following table shows the available command list:

Command	Control	Enter	Description
osd	on	[Enter]	OSD on
osd	off	[Enter]	OSD off

Verification

After entering a command, a verification message appears at the end of the command line as follows:

- **Command OK** - indicates that the command is correct and successfully performed by the switch
- **Command incorrect** - indicates that the command has the wrong format and/or values.

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Appendix

Safety Instructions

General

- Read all of these instructions. Save them for future reference.
- Follow all warnings and instructions marked on the device.
- This product is for indoor use only.
- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- Do not use the device near water.
- Do not place the device near, or over, radiators or heat registers.
- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any kind on the device.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- The device is designed for IT power distribution systems with 230V phase-to-phase voltage.
- To prevent damage to your installation it is important that all devices are properly grounded.
- The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.

- If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or un-interruptible power supply (UPS).
- Position system cables and power cables carefully; Be sure that nothing rests on any cables.
- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.
- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

Rack Mounting

- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- Always load the rack from the bottom up, and load the heaviest item in the rack first.
- Make sure that the rack is level and stable before extending a device from the rack.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- Make sure that all equipment used on the rack – including power strips and other electrical connectors – is properly grounded.
- Ensure that proper airflow is provided to devices in the rack.
- Ensure that the operating ambient temperature of the rack environment does not exceed the maximum ambient temperature specified for the equipment by the manufacturer.
- Do not step on or stand on any device when servicing other devices in a rack.

Technical Support

International

- For online technical support – including troubleshooting, documentation, and software updates: **http://eservice.aten.com**
- For telephone support, see *Telephone Support*, page iii:

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase.
- Your computer configuration, including operating system, revision level, expansion cards, and software.
- Any error messages displayed at the time the error occurred.
- The sequence of operations that led up to the error.
- Any other information you feel may be of help.

Specifications

Function		VM5808H
Connectors	HDMI In	8 x HDMI Type A Female (Black)
	HMDI Out	8 x HDMI Type A Female (Black)
	Ethernet	1 x RJ-45 Female
	RS-232	1 x DB9 Female (Black)
	IR Port	1 x Mini Stereo Jack Female (Black)
	Power	1 x 3-prong AC Socket
	LCD	1 x LCD Module
Switches	In / Out	8 x 8 Pushbuttons
	Cancel	1 x Pushbutton
	Menu	1 x Pushbutton
	Profile	1 x Pushbutton
	Enter	1 x Pushbutton
	Power	1 x Rocker
I/P Rating		100-240Vac; 50-60Hz; 1.0A
Power Consumption		120V / 60W; 230V / 62W
Environment	Operating Temp.	0–50ºC
	Storage Temp.	-20–60ºC
	Humidity	0–80% RH, Non-condensing
Physical Properties	Housing	Metal
	Weight	4.03 kg
	Dimensions (L x W x H)	43.20 x 27.10 x 4.40 cm

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or update. For further inquiries, please contact your direct vendor.